#23

BRIEF AND SUPPLEMENTAL APPENDIX FOR APPELLEE COMMISSIONER OF PATENTS AND TRADEMARKS

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

97-1202
(Serial No. 08/054,951)

IN RE CLEMENT

Appeal from a decision of the Board of Patent Appeals and Interferences dated June 26, 1996.

NANCY J. LINCK
Solicitor

ALBIN F. DROST
Deputy Solicitor

JOHN M. WHEALAN
SCOTT A. CHAMBERS
Associate Solicitors
P.O. Box 15667
Arlington, Virginia 22215
703-305-9035

Attorneys for the Commissioner
of Patents and Trademarks

May 13, 1997

Representative claim 49 of application no. 08/054,951 ('951 application)

49. A method of treating a mixture of printed and contaminated waste paper in order to produce a pulp for use in the manufacture of paper and paperboards, said waste paper containing non-ink contaminants including stickies which method comprises:

(a) forming a first aqueous fibrous suspension of said wasted paper at a temperature below the melting point of the non-ink contaminants by applying specific mechanical energy sufficient to form a pumpable slurry and to release substantially all of the non-ink contaminants including the stickies from the surface of the paper without dispersing such non-ink contaminants as finely divided particles throughout the fibrous suspension;

(b) removing substantially all of the non-ink contaminants including the stickies, which have been released without dispersal as finely divided particles from the first fibrous suspension by screening and cleaning to form a second aqueous fibrous suspension substantially free of the non-ink contaminants including the stickies;

(c) after the step of removing the non-ink contaminants, (1) softening the ink vehicles and weakening their binding with the surface of the fibers, and then (2) detaching the ink particles from the surface of the fibers and dispersing the particles into the second fibrous suspension by submitting the second fibrous suspension at a consistency of more than 15% to the simultaneous actions of temperature, pressure, specific energy and chemical dosing sufficient to insure softening of the ink vehicles, detachment of the ink particles from the surface of the fibers and dispersion of the detached ink particles into the second fibrous suspension, whereby higher specific energy inputs and higher temperatures are used to detach the ink particles from the fibers of the second fibrous suspension after removal of the non-ink contaminants than are used on the first fibrous suspension before removal of the non-ink contaminants;

(d) limiting the total duration of step (c)(1) and (c)(2) to a range between 2 and 10 minutes and

(e) removing the detached ink particles from the second fibrous suspension to provide a brightness of at least 59 ISO in the final pulp.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases: Page

Statutes:

Other authorities:

RULE 47.5 STATEMENT OF RELATED CASES

No other appeal from the Board of Patent Appeals and Interferences ("Board") in connection with the patent application on appeal has been previously before this or any other court.

The appealed application is an attempted reissue of U.S. Patent No. 4,780,179 ("the '179 patent). The '179 patent is the subject of district court litigation, Kamyr, Inc. v. Clement, 952 F. Supp. 12, 42 USPQ2d 1235 (D.D.C. 1997). On January 31, 1997, the district court granted Kamyr's motion for summary judgment of noninfringement of the '179 patent. Id. at 18, 42 USPQ2d at 1240 (a copy of the decision is provided in the supplemental appendix, SA1-7).[1] The Kamyr decision is on appeal to this Court. Appeal Nos. 97-1262, 97-1267 (consolidated).

---

[1] "SA" refers to the supplemental appendix of this brief; "A" refers to the joint appendix; and "Br." refers to appellant's appeal brief.

RULE 47.6 STATEMENT OF JURISDICTION

(a) The Board of Patent Appeals and Interferences had jurisdiction under 35 U.S.C. § 134.

(b) This Court has jurisdiction under 35 U.S.C. § 141 and 28 U.S.C. § 1295(a)(4)(A).

(c) The final decision of the Board of Patent Appeals and Interferences was entered on June 26, 1996. The time for appeal is two months. 35 U.S.C. § 142 and 37 C.F.R. § 1.304(a). Appellant failed to file a notice of appeal within the two month period; however, on November 6, 1996, appellant petitioned the Commissioner for an extension of time to file a notice of appeal (A90-94), which was granted on December 12, 1996. A102-05.

BRIEF AND SUPPLEMENTAL APPENDIX FOR APPELLEE
COMMISSIONER OF PATENTS AND TRADEMARKS

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

97-1202
(Serial No. 08/054,951)

IN RE CLEMENT

Appeal from a decision of the Board of Patent Appeals and
Interferences dated June 26, 1996.

I. STATEMENT OF THE ISSUES

The ultimate issue in this appeal is whether the Board of Patent Appeals and Interferences (Board) erred in rejecting the reissue claims of this application since they lacked any basis for reissue. Specific issues that underlie the Board's determination include:

1. Whether the Board committed reversible error in rejecting appellant's reissue claims based on the "recapture" rule; and

2. Whether the Board committed reversible error in rejecting the reissue claims based on appellant's defective reissue declaration.

PROSECUTION HISTORY

	Appl. S/N	Date Filed	Type	Status
ORIGINAL PROSECU-TION	06/482,623 ('623)	Apr. 6, 1983	Parent	Abandoned
	06/822,943 ('943)	Jan. 27, 1986	Continuation	Issued as U.S. Patent No. 4,780,179 ('179) on Oct. 25, 1988
REISSUE PROCEED-INGS	07/600,012 ('012)	Oct. 18, 1990	Parent	Abandoned
	08/054,951 ('951)	Apr. 27, 1993	Continuation	Subject of this appeal

II. STATEMENT OF THE CASE

Appellant's statement of the case is incomplete; therefore, a separate statement of the case is set forth below.[2]

A. The relevant prosecution history

This appeal involves the reissue application of U.S. Patent No. 4,780,179 ('179). The '179 patent claims a method for recycling waste paper. A16. The '179 patent issued from application serial number ("S/N") 06/822,943 ('943), which was a continuation of application S/N 06/482,623 ('623).

The reissue application on appeal, S/N 08/054,951 ('951), is a continuation of reissue application S/N 07/600,012 ('012). The table on the opposite page summarizes these four applications. Since one basis for rejecting the reissue claims on appeal is that appellant is attempting to "recapture" subject matter he surrendered during the original prosecution of the '179 patent, all four applications are relevant.

---

[2] Appellant did not argue the claims separately to the Board. A66. Accordingly, the claims stand and fall together, and the Commissioner will only discuss representative claims. See In re Beattie, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed. Cir. 1992).

1. The "original" prosecution history that led to the issuance of the claims of '179 patent

a. The '623 application

The '623 application was filed on April 6, 1983, containing thirty-two claims. A18, col. 1, lines 5-6, A206, 230-35. Original claim 1 was directed to a five-step process for treating waste paper. A230; Br. at 5-6.[3]

Responsive to a restriction requirement, appellant elected to prosecute claims 1-13 on July 2, 1984. A251. Appellant also made a single word change to clause (e) of claim 1 (adding the word "provide"). A246-52; Br. at 6-7.

On April 9, 1985, the examiner rejected all claims under 35 U.S.C. § 103 as unpatentable over Ortner, in view of Raymond and Eriksson. A253-56.

---

[3] Since in his statement of the facts, appellant has set forth the language of the representative claim as it changed during prosecution (Br. at 5-12), the Commissioner will only repeat such language when it is deemed necessary.

The Commissioner notes, however, that although appellant's brief contains the claims themselves as amended during prosecution, it lacks any reference to the numerous statements made by appellant in the "remarks" section of his amendments. Compare, Br. at 5-13, with, e.g., A262-67, 326-37, 347-53, 380-87.

Specifically, the examiner found that Ortner disclosed the paper recycling process as claimed. A254. In addition, the examiner found that a person of ordinary skill would have known of the claimed process parameters (e.g., temperature, pH, etc.) as taught by Raymond and Eriksson. A254.

On July 9, 1985, appellant again amended claim 1:

> 1. (Twice Amended) A method of treating a mixture of printed and contaminated waste paper in order to produce pulps for the use in the manufacture of [pulps] paper and paperboards, which method comprises:
>
> a) forming an acqueous [sic] [pulp] fibrous suspension of said waste material at [low] room temperature, applying [low] specific mechanical energy generally lower than 50 KW.H/Ton [, thereby forming] to form a [pulpable] pumpable slurry [and releasing the non-ink contaminants from the surface of the paper but without dispensing them inside] in which only the ink is dispersed as fine particles in the fibrous suspension;
>
> b) separating the non-ink contaminants from the [pulp] fibrous suspension by mechanical [separation] means, without the use of froth flotation or solvent extraction or [other] like process, using [conventional] screens and centrifugal cleaners [and without any further application of strong substantial shear forces to the pulp];
>
> c) softening the ink [particles] vehicles and weakening [of] their [bondings] binding with the surface of the fibres [sic] by submitting the [pulp] fibrous suspension at a consistency of more than 15% at the simultaneous actions of (A) high temperature - between 85 and 130 C - (B) high shear forces substantially corresponding to a specific mechanical energy of more than 50 KW.H/Ton during less than 10 minutes applied at the said consistency of more than 15% and (C) at least one de-inking agent, alkaline conditions;

d) detaching the ink particles from the surface of the fibres [sic] and dispersing them into the fibrous suspension by submitting the [pulp] fibrous suspension to the simultaneous actions of (A) high temperature - between 85 and 130 C - (B) high shear forces substantially corresponding to a specific mechanical energy of more than 50 KW.H/Ton during less than 10 minutes applied at the said consistency of more than 15% and (C) at least one chemical dispersing agent, under alkaline conditions; the total duration of the ink releasing and dispersing treatment (c) and (d) being kept between 2 and 10 minutes;

e) removing the free ink particles [to provide the degree of brightness required by the final use of the pulp] which have been detached from the fibres [sic]".

A258-60; see A257-67; Br. at 7-8 (bracketed material removed from old claim, underlined material added by the July 9, 1985 amendment). Thus, appellant added numerous process parameter limitations to claim 1 (including limitations with respect to temperature, mechanical energy, and time) to distinguish over the prior art. Moreover, appellant explained that the added specific process parameters of his claims distinguished them from the prior art. See A262-67. For example, appellant stated that in step (a) of his newly claimed process all the non-fibrous contaminants are separated at "room temperature." A262. Appellant also argued that the specific process parameters in steps (c) and (d) of his claims distinguished his invention from the prior art because the prior art did "not teach the combined use of high temperature, intense mechanical energy and chemical

action for a short period of time in order to prepare the above mentioned contaminants to be removed." A265.

The examiner issued a final office action rejecting all claims as obvious determining that: (i) the prior art taught the general process claimed, and (ii) a person of ordinary skill would have adjusted the process parameters to those claimed. See A269-71.

b. The '943 application

On January 27, 1986, appellant filed the '943 continuation application (A316-37), canceling claim 1 and adding claim 42 (claim 42 was essentially the same as previous claim 1, incorporating all previous amendments). Compare A325-26 (claim 42) with A258-60 (claim 1); see Br. at 8-9. Appellant again argued the claims were distinguishable from the prior art based on the specific process parameters. See A328-37.[4] Appellant continued to expressly distinguish

---

[4] For example, to distinguish step (a), appellant stated that he "amended the claims of this application to indicate rather clearly that the aqueous fibrous suspension of waste paper is prepared at room temperature without the de-inking chemicals." A333. Similarly, to distinguish steps (c) and (d), appellant stated that the operating conditions were a "combination of high temperature, high shear forces, and at least one de-inking agent under alkaline conditions." A328-

(continued...)

his claims from the prior art based on the various process parameters of his claims, which he is now proposing to delete:

> Another essential aspect of Applicant's invention which distinguishes it from the prior art is found in the combinations of heat, high shear, and chemical in the ink softening and detaching steps, and clearly distinguishes Applicant's invention from the art as exemplified by Ortner.

A336.

On September 23, 1986, the examiner rejected all claims as obvious based on Burns and Eriksson. A338-43. Appellant again amended his claims by adding additional process parameter limitations to claim 42. For example, appellant narrowed the pH limitations of steps (c) and (d) from "alkaline" to "strong alkaline conditions having a pH preferably greater than 9." A346; see A350 Br. at

---

[4](...continued)
329. Appellant argued that in his invention, "the specific mechanical energy applied in the pulper is limited to less than 50 KW.H./Ton." A330. Appellant stated that his process "differ[s] significantly from the Ortner process. Applicant treats the thickened slurry with a combination of high temperature, mechanical energy, and a de-inking agent . . . under alkaline conditions." A331. Appellant stated that "although Ortner could use higher temperatures in his reaction tower 9, it is not possible to simultaneously subject the fibrous suspension to the high shear forces greater than 50 KW.H/Ton in such a structure." A331.

9-10. Appellant concluded by arguing that "[t]hrough rigidly controlled parameters, the reclamation process is improved," and thus distinguished his invention from the prior art. A352.

Appellant further amended the pH limitations of steps (c) and (d) to a "pH of at least 9." A366; Br. at 11. Finally, to gain allowance, appellant further amended the claims by adding limitations such as "room temperature" to step (b) and a brightness limitation to step (f). A428; Br. at 12. The claims of the '179 patent issued on October 25, 1988. A16-24.

2. The reissue proceedings

a. The '012 reissue application

On October 18, 1990, appellant filed the '012 seeking reissuance of the '179 patent claims. A106-37. The '012 reissue application contained the eighteen claims of the '179 patent, as well as twenty-one additional claims (claims 19-49). A118-28.

On March 25, 1991, the examiner rejected all claims of the reissue application as lacking any basis for reissue pursuant to 35 U.S.C. § 251. A138-40. The examiner found that the reissue claims sought were essentially the same as those appellant elected not to prosecute in the '623 application, and that reissue was not a substitute for the failure to file a divisional application. A139. Appellant abandoned these claims and filed the '951 continuation application.

b. The '951 reissue application

On April 27, 1993, appellant filed the '951 reissue application as a continuation of the '012 reissue application. A31-32. In a preliminary amendment, appellant canceled all of his earlier reissue claims and added claims 49-52, which are identical to the reissue claims that are the subject of this appeal. Compare A33-35 with A14-15. Representative claim 49 on appeal states:

> 49. A method of treating a mixture of printed and contaminated waste paper in order to produce a pulp for use in the manufacture of paper and paperboards, said waste paper containing non-ink contaminants including stickies, which method comprises:
>
> (a) forming a first aqueous fibrous suspension of said wasted paper at a temperature below the melting point of the non-ink contaminants by applying specific mechanical energy sufficient to form a pumpable slurry and to release substantially all of the non-ink contaminants including the stickies, from the surface of the paper without dispersing such non-ink contaminants as finely divided particles throughout the fibrous suspension;
>
> (b) removing substantially all of the non-ink contaminants including the stickies, which have been released without dispersal as finely divided particles from the first fibrous suspension by screening and cleaning to form a second aqueous fibrous suspension substantially free of the non-ink contaminants including the stickies;
>
> (c) after the step of removing the non-ink contaminants, (1) softening the ink vehicles and weakening their binding with the surface of the fibers, and then (2) detaching the ink particles from the surface of the fibers and dispersing the particles into the second fibrous suspension by submitting the second fibrous suspension at a consistency of more than 15% to the simultaneous actions of temperature, pressure, specific energy and chemical dosing sufficient to insure softening of the ink vehicles, detachment of the

ink particles from the surface of the fibers and dispersion of the detached ink particles into the second fibrous suspension, whereby higher specific energy inputs and higher temperatures are used to detach the ink particles from the fibers of the second fibrous suspension after removal of the non-ink contaminants than are used on the first fibrous suspension before removal of the non-ink contaminants;

(d) limiting the total duration of step (c) (1) and (c) (2) to a range between 2 and 10 minutes and

(e) removing the detached ink particles from the second fibrous suspension to provide a brightness of at least 59 ISO in the final pulp.

A33-35, see A14-15.

The examiner rejected all reissue claims based on the "recapture" rule because appellant was "attempting to recapture claimed subject matter deliberately narrowed by applicant during original prosecution in order to obtain the patent." A46 (emphasis in the original). Specifically, the examiner determined that during original prosecution of the '179 patent, appellant had "narrowed the claims to set forth specific" limitations to overcome the prior art which included mechanical energy levels, temperatures and pH values. A46. The examiner noted that appellant previously admitted that these specific process parameters were added to claim 1 during original prosecution to distinguish the prior art. A47; see A188.

The examiner also rejected the claims based on a defective reissue declaration. A46-48.

B. The Board decision

On January 26, 1996, the Board affirmed the examiner's rejections of all reissue claims based on (1) the "recapture" rule and (2) the defective reissue declaration.[5]

The Board found:

> There is no dispute on this record that claims 49-52 constitute an attempt to recapture broad subject matter surrendered by amendments of original patent application claims to include temperature, mechanical energy and pH limitations in an effort to avoid prior art rejections.

A7. The Board determined that the numerous amendments limiting the claims during original prosecution "were made to avoid prior art rejections, thus constituting an implicit admission that the unamended claims were not patentable over the prior art." A7.

The Board analyzed the prosecution history finding that appellant added several limitations to avoid the prior art. The Board determined that appellant made "a deliberate decision . . . to surrender more broadly claimed subject matter

---

[5] The Board reversed the examiner's third basis for rejection, i.e., that the broadening '951 reissue application was not filed within two years of the issuance of the '179 patent. A3-5, A11.

in a successful attempt to overcome the Ortner-based prior art." A9. In addition, the Board noted that appellant had previously agreed with the examiner's position that the specific process parameters of claim 1 were added to distinguish over the prior art. A9. The Board concluded:

> [W]e are convinced that the room temperature limitation in step (a) as well as the combined high temperature/mechanical energy limitations in steps (c) and (d) of the patent claims (i) were deliberately added to overcome the prior art rejections based upon Ortner and Burns respectively, (ii) were argued by the appellant to be features not suggested by Ortner or Burns and (iii) were accepted by the examiner as distinguishing over these references. Since these limitations are not present in appealed claims 49-52, it is evident that these claims are an attempt by the appellant to recapture the broader subject matter which he deliberately surrendered in order to overcome prior art rejections during prosecution of his patent applications.

A10-11. Since recapture is not an appropriate basis for reissue, the Board rejected all of the reissue claims. A11.

The Board also rejected all reissue claims based on appellant's defective reissue declaration. A2, 5-7. The Board found several defects in the declaration. A6. For example, the Board found appellant's explanation as to how the errors arose regarding the temperature limitations in steps (c) and (d) unacceptable, since these limitations were present throughout prosecution, including claim 1 as originally filed. A6. In addition, the declaration made no reference to the error (or how it arose) regarding the "room temperature" limitation in step (b). A6.

Therefore, the Board rejected all reissue claims based on a defective reissue declaration. A6-7.

III. SUMMARY OF THE ARGUMENT

The reissue claims were properly rejected based on the recapture rule since appellant is attempting to claim subject matter surrendered during prosecution to avoid the prior art. Appellant was forced to include process parameter limitations to distinguish over the prior art. Throughout the original prosecution of the '179 patent, appellant expressly and repeatedly argued that his claims were distinguishable over the prior art because of the unique set of "rigidly controlled parameters" contained in his claims. These process parameters included temperature, mechanical energy, and pH. To gain allowance, appellant repeatedly narrowed his claims by adding additional process parameter limitations. Appellant's use of reissue to regain the very subject matter he surrendered to avoid the prior art and gain allowance of the '179 patent is barred by the recapture rule.

Furthermore, appellant's present argument that the recapture rule does not apply since his reissue claims are narrower in scope in at least one significant respect than original application claim 1 prior to being amended, was never made to the Office. Therefore, the Court should not consider it. In any case, the argument is unsupported in both law and fact. Appellant's isolated comparison of the reissue claims with only the original unamended claims essentially ignores the

complete prosecution history, which includes numerous, subsequent, narrowing amendments and numerous admissions by appellant relied on by the examiner. In addition, the recapture rule applies since the reissue claims "are broader than the original patent claims in a manner directly pertinent to the subject matter surrendered during prosecution." Mentor Corp. v. Coloplast, Inc., 998 F.2d 992, 996, 27 USPQ2d 1521, 1525 (Fed. Cir. 1993).

Alternatively, the reissue claims are properly rejected since appellant's reissue declaration is defective. The reissue declaration fails to address each of the alleged errors, fails to sufficiently explain how and when the errors occurred, and fails to sufficiently explain how and when the errors were discovered. Moreover, since the alleged errors have no basis for reissue based on the recapture rule, the defective declaration is not curable.

IV. ARGUMENT

A. Standard of review

The determination of whether the statutory requirements of 35 U.S.C. § 251 have been met is a question of law which the court reviews de novo. Mentor, 998 F.2d at 994, 27 USPQ2d at 1524. This legal conclusion, however, is based on underlying findings of fact. Id.

This Court has applied the "clearly erroneous" standard in reviewing the Office's factual findings. See, e.g., In re Kemps, 97 F.3d 1427, 1430, 40 USPQ2d

1309, 1312 (Fed. Cir. 1996). However, this Court should overrule its precedent and should review the Office's factual findings under the standards provided by the Administrative Procedure Act, 5 U.S.C. §§ 701-706 (1994). The Office's arguments relating to this issue have been repeatedly made to this Court and will not be reproduced here. See, e.g., The Commissioner's Suggestion For Hearing In Banc in In re MacDermid, Inc., No. 96-1491 (declined Apr. 15, 1997) and the Commissioner's brief in the same case.[6]

B. The reissue claims were properly rejected based on the recapture rule

Section 251 of the reissue statute provides a statutory basis for correcting an "error" made during original prosection. 35 U.S.C. § 251; In re Weiler, 790 F.2d 1576, 1579, 229 USPQ 673, 675 (Fed. Cir. 1986). Reissue is an "extraordinary" procedure and is not a substitute for customary Office appeal

---

[6] As suggested by the Order Declining Hearing In Banc in MacDermid, if the panel in this case "should discern clear error in the Board's fact findings . . . the Commissioner may choose to file a Suggestion for Rehearing in banc" to address whether the Court should overrule its precedent and apply the APA standards of review. Slip op. at 2. The Commissioner is presently considering whether to file a petition for rehearing with a suggestion for rehearing in banc in In re Zurko, No. 96-1258 (Fed. Cir. Apr. 15, 1997), and In re Lueders, No. 96-1391 (Fed. Cir. Apr. 24, 1997).

procedures. Ball Corp. v. United States, 729 F.2d 1429, 1435, 221 USPQ 289, 293-94 (Fed. Cir. 1984). Reissue must be adequately supported by the circumstances detailed in 35 U.S.C. § 251 and 37 C.F.R. § 1.175. Ball, 729 F.2d at 1435, 221 USPQ at 293-94.

The reissue statute is remedial in nature and is based on "fundamental principles of equity and fairness" and should be construed liberally. See, e.g., Weiler, 790 F.2d at 1579, 229 USPQ at 675. However, the "reissue statute was not enacted as a panacea for all patent prosecution problems." Hewlett-Packard Co. v. Bausch & Lomb, Inc., 882 F.2d 1556, 1565, 11 USPQ2d 1750, 1758 (Fed. Cir. 1989) (quoting Weiler, 790 F.2d at 1582, 229 USPQ at 677). Reissue is not intended to give the patentee a second opportunity to prosecute his original application de novo. Mentor, 998 F.2d at 995, 27 USPQ2d at 1524; Weiler, 790 F.2d at 1582, 229 USPQ at 677. The term "error" in Section 251 requires inadvertence, accident, or mistake, and does not include deliberate acts. See Hewlett-Packard, 882 F.2d at 1565, 11 USPQ2d at 1758; Weiler, 790 F.2d at 1582, 229 USPQ at 677.

1. The "recapture" rule bars a patentee from obtaining through reissue subject matter he previously surrendered to obtain allowance of the original patent claims

The deliberate decision of an applicant to surrender specific subject matter during prosecution to obtain a patent does not constitute "error" for purposes of

Section 251. Mentor, 998 F.2d at 995, 27 USPQ2d at 1524. This doctrine is often referred to as the "recapture" rule:

> If a patentee tries to recapture what he or she previously surrendered in order to obtain allowance of original patent claims, that "deliberate withdrawal or amendment . . . cannot be said to involve the inadvertence or mistake contemplated by 35 U.S.C. § 251, and is not an error of the kind which will justify the granting of a reissue patent which includes the matter withdrawn."

Id. (quoting Haliczer v. United States, 356 F.2d 541, 545, 148 USPQ 565, 569 (Ct. Cl. 1966)). Accordingly, the recapture rule bars a patentee from obtaining in reissue that which he expressly surrendered during the original prosecution to traverse the prior art. Mentor, 998 F.2d at 995-96, 27 USPQ2d at 1524-25.

"The recapture rule bars the patentee from acquiring, through reissue, claims that are of the *same or of broader scope* than those claims that were canceled from [or amended during] the original application." Ball, 729 F.2d at 1436, 221 USPQ at 295 (emphasis in the original), quoted in Mentor, 998 F.2d at 995, 27 USPQ2d at 1524. The recapture rule applies when reissue claims "are broader than the original patent claims in a manner directly pertinent to the subject matter surrendered during prosecution." Mentor, 998 F.2d at 996, 27 USPQ2d at 1525.

2. Appellant is barred from recapturing subject matter he deliberately surrendered during original prosecution to obtain his patent

A comparison of claim 1 of the '179 patent with reissue claim 49 reveals that appellant is attempting to significantly broaden his claims by eliminating numerous process parameter limitations (indicated by the underlining):

Claim 1 ('179 patent)	Claim 49 ('951 reissue application)
1. A method of treating a mixture of printed and contaminated waste paper in order to produce a pulp for use in the manufacture of paper and paperboards, said waste paper containing non-ink contaminants including stickies, which method comprises:	49. A method of treating a mixture of printed and contaminated waste paper in order to produce a pulp for use in the manufacture of paper and paperboards, said waste paper containing non-ink contaminants including stickies which method comprises:
(a) forming a first aqueous fibrous suspension of	(a) forming a first aqueous fibrous suspension of
said waste paper at room temperature	said wasted paper at a temperature below the melting point of the non-ink contaminants
by applying specific mechanical energy lower that [sic] 50 KW.H/Ton	by applying specific mechanical energy sufficient
to form a pumpable slurry and to release substantially all of the non-ink contaminants including the stickies, from the surface of the paper and without dispersing such non-ink contaminants as finely divided particles throughout the fibrous suspension;	to form a pumpable slurry and to release substantially all of the non-ink contaminants including the stickies from the surface of the paper without dispersing such non-ink contaminants as finely divided particles throughout the fibrous suspension;

(b) removing substantially all of the non-ink contaminants including the stickies, which have been released without dispersal as finely divided particles from the first fibrous suspension by screening and cleaning at room temperature to form a second aqueous fibrous suspension substantially free of the non-ink contaminants including the stickies;	(b) removing substantially all of the non-ink contaminants including the stickies, which have been released without dispersal as finely divided particles from the first fibrous suspension by screening and cleaning to form a second aqueous fibrous suspension substantially free of the non-ink contaminants including the stickies;
(c) after the step of removing the non-ink contaminants softening the ink vehicles and weakening their binding with the surface of the fibers	(c) after the step of removing the non-ink contaminants, (1) softening the ink vehicles and weakening their binding with the surface of the fibers, and then
by submitting the second fibrous suspension at a consistency of more than 15% to the simultaneous actions of (A) a high temperature between 85° and 130° C., (B) high shear forces substantially corresponding to a specific mechanical energy of more than 50 KW.H/Ton applied at the said consistency of more than 15% and (C) at least one deinking agent under strong alkaline conditions having a pH of at least 9; and	
(d) detaching the ink particles from the surface of the fibers and dispersing them into the second fibrous suspension by submitting the	(2) detaching the ink particles from the surface of the fibers and dispersing the particles into the second fibrous suspension by submitting the
second fibrous suspension to	second fibrous suspension at a consistency of more than 15% to
the simultaneous actions of	the simultaneous actions of
(A) high temperature between 85° and 130° C.,	temperature,

(B) high shear forces substantially corresponding to specific mechanical energy of more than 50 KW.H/Ton applied at the said consistency of more that 15% and	pressure, specific energy
(C) at least one chemical dispersing agent, under strong alkaline conditions having a pH of at least 9	and chemical dosing sufficient to insure softening of the ink vehicles, detachment of the ink particles from the surface of the fibers and dispersion of the detached ink particles into the second fibrous suspension,
whereby higher specific energy inputs and higher temperatures are used to detach the ink particles from the fibers of the second fibrous suspension after removal of the non-ink contaminants than are used on the first fibrous suspension before removal of the non-ink contaminants;	whereby higher specific energy inputs and higher temperatures are used to detach the ink particles from the fibers of the second fibrous suspension after removal of the non-ink contaminants than are used on the first fibrous suspension before removal of the non-ink contaminants;
(e) limiting the total duration of the ink softening and detaching steps (c) and (d) to a range between 2 and 10 minutes and	(d) limiting the total duration of step (c)(1) and (c)(2) to a range between 2 and 10 minutes and
(f) removing the detached ink particles from the second fibrous suspension to provide a brightness of at lesat [sic] 59 ISO the final pulp.	(e) removing the detached ink particles from the second fibrous suspension to provide a brightness of at least 59 ISO in the final pulp.

Compare A23, col. 12, ln. 57 - A24, col. 13, ln. 47 with A14-15. Thus, appellant attempts to eliminate numerous limitations from claim 1, including limitations with respect to: (i) temperatures, (ii) values of mechanical energy, and (iii) pH conditions. However, the recapture rule prohibits such conduct since during the original prosecution of the '179 patent, appellant argued that these same

limitations, both alone and in combination, distinguished his invention from the prior art.

For example, appellant would replace the "room temperature"[7] limitation of step (a) with a "temperature below the melting point of the non-ink contaminants," and thus cover a much wider range of temperatures. However, during original prosecution appellant explained that his step (a) was conducted at "room temperature" which was not disclosed in the prior art. A263, A333. Therefore, the recapture rule bars appellant from eliminating the "room temperature" limitation in step (a). See, e.g., Mentor, 998 F.2d at 995-97, 27 USPQ2d at 1524-25. Similarly, since appellant added the "lower tha[n] 50 KW.H/Ton" limitation to step (a) and the "room temperature" limitation to step (b) in order to distinguish the prior art (see A325, 330, 379, 382), his attempt to eliminate them by reissue is barred by the recapture rule. See Mentor, 998 F.2d at 995-97, 27 USPQ2d at 1524-25.

The side-by-side comparison also reveals that appellant is attempting to eliminate the temperature, mechanical energy, and pH limitations of steps (c) and (d): unique parameters that appellant argued throughout prosecution distinguished his claims from the prior art. See A262-67, 326-37, 347-53, 380-87. Specifically, appellant eliminates the 85-130 °C temperature range limitation of

---

[7] Room temperature is approximately 20-25 °C.

claim 1 and claims any temperature; eliminates the mechanical energy range of "more than 50 KW.H/Ton" and claims any mechanical energy; and eliminates the pH range "of at least 9" and claims any pH conditions. However, appellant repeatedly and expressly argued throughout prosecution that his unique set of "rigidly controlled parameters" (A352) distinguished his invention from the prior art, e.g.:

> More significantly, the subsequent steps of Applicant's process which deal with the removal of the ink vehicles from the paper fibers and the pulp differ significantly from the Ortner process. Applicant treats the thickened slurry with a combination of high temperature, mechanical energy, and a de-inking agent to soften the ink vehicles and detach them from the surface of the fibers. These steps of Applicant's process take place under alkaline conditions, preferably in a kneader 5.
>
> . . . .
>
> While it is true that Ortner uses mechanical energy in his stages 1, 5, and 6, it is equally clear that the essential aspect of Applicant's invention, namely the combination of high temperature mechanical energy and high consistency that takes place in Applicant's kneader 5 cannot occur in Ortner's reaction tower 9. Thus, Ortner's and Applicant's inventions are clearly distinguishable.
>
> . . . .
>
> Another essential aspect of Applicant's invention which distinguishes it from the prior art is found in the combinations of heat, high shear, and chemicals in the ink softening and detaching steps, and clearly distinguishes Applicant's invention from the art as exemplified by Ortner.

A331, 333, 336.

Appellant's attempt to use reissue to eliminate these numerous limitations and regain expressly surrendered coverage necessary for allowance is the exact type of conduct the recapture rule is meant to preclude:

> Error under the reissue statute does not include a deliberate decision to surrender specific subject matter in order to overcome prior art, a decision which in light of subsequent developments in the marketplace might be regretted. It is precisely because the patentee amended his claims to overcome prior art that a member of the public is entitled to occupy the space abandoned by the patent applicant. Thus the reissue statute cannot be construed in such a way that competitors, properly relying on prosecution history, become patent infringers when they do so. In this case, [patentee] narrowed its claims for the purpose of obtaining allowance in the original prosecution and it is now precluded from recapturing what it earlier conceded.

Mentor, 998 F.2d at 996, 27 USPQ2d at 1525. Since appellant's reissue claims do not meet the legal requirements for reissue, they were properly rejected. See id. at 997, 27 USPQ2d at 1526.

C. The district court's recent decision in Kamyr, Inc. v. Clement supports the Board's rejection of appellant's reissue claims based on the recapture rule

On January 31, 1997, the district court granted Kamyr's motion for summary judgment of noninfringement of the '179 patent. Kamyr, 952 F. Supp. at 18, 42 USPQ2d at 1240. SA1-7.[8] The court determined that Kamyr's accused

---

[8] The Board did not rely on Kamyr because appellant did not bring (continued...)

paper recycling process did not literally infringe the claims of the '179 patent for several reasons, including (i) "the temperatures for various steps of the two processes differ," and (ii) Kamyr's process does not employ the "simultaneous action of high temperature, high shear force and chemical de-inking" as does the claimed invention. Id. at 13-14, 42 USPQ2d at 1236. Thus the court found no literal infringement since Kamyr's process does not use several of the specific process parameters of the '179 patent claims. Id.

More importantly, based on the doctrine of prosecution history estoppel, the court found that Kamyr's process did not infringe the '179 patent under the doctrine of equivalents. The court stated, "[o]ver the course of this prosection history, Clement's claims were narrowed significantly." Id. at 15, 42 USPQ2d at 1237. For example, the court determined that "Clement's amendment filed July 9, 1985, distinguishes his process from Ortner." Id., 42 USPQ2d at 1238. Specifically with respect to steps (c) and (d) of claim 1 the district court found:

> In remarks accompanying his July 9, 1985 amendment, Clement was at pains to distinguish the "thermo-chemi-mechanical

---

[8](...continued)
the case to the Office's attention as urged by Section 1442.04 of the MPEP ("[l]itigation begun after filing of the reissue application . . . should be promptly brought to the attention of the Office."). MPEP § 1442.04 (citing 37 C.F.R. § 1.56(b)).

> treatment" stage of his process from Eriksson, which he argues, "does not teach the combined use of high temperature, intense mechanical energy and chemical action for a short period of time."

Id. at 16, 42 USPQ2d at 1238. The court stated that "Clement's infringement counterclaim attempts 'to reclaim the very thing [he] surrendered by way of amendment.'" Id. at 18, 42 USPQ2d at 1240. The court ultimately determined that Kamyr's process did not infringe since the Kamyr process did not remove all of the non-ink contaminants during step (b) and since the Kamyr process did not screen and clean downstream of the dispenser. Id. The court concluded:

> Clement's surrender of the broader claim during prosecution was critical to the allowance of his patent and estops his argument that the Kamyr process infringes the '179 patent by the doctrine of equivalents.

Id. See also Warner-Jenkinson v. Hilton Davis Chem., 117 S. Ct. 1040, 1051 (1997) (when no explanation is provided, court should presume a claim limitation was added to avoid the prior art, prosecution history estoppel bars the application of the doctrine of equivalents to that limitation).

The Kamyr decision is relevant to this appeal since the doctrine of prosecution history estoppel is related to the recapture rule. See Ball, 729 F.2d at 1439, 221 USPQ at 296-97. Both doctrines prevent a patentee from broadening his claims to recapture subject matter surrendered to gain issuance of his patent. See Warner Jenkinson, 117 S. Ct. at 1049-51 (discussing prosecution history

estoppel); Mentor 998 F.2d at 995-96, 27 USPQ2d at 1524-25 (discussing recapture rule). In the instant case, appellant has not overcome the presumption that the claim limitations were added to avoid the prior art. See Warner-Jenkinson, at 1051. Indeed, the Board determined that the claim limitations were added to overcome the prior art.

Thus, just as the court in Kamyr found that Mr. Clement was estopped from broadening his claims, the Board properly rejected appellant's reissue application based on the recapture rule. Similarly, both the district court and the Board found that Mr. Clement was attempting to "reclaim" or "recapture" that which he surrendered during original prosecution of the '179 patent to avoid the prior art.

D. Appellant's new argument on appeal is untimely and mischaracterizes the recapture rule

Appellant's main argument, made for the first time on appeal, is that the recapture rule does not apply since his reissue claims are narrower in scope in at least one significant respect than original application claim 1 prior to amendment. Br. at 18. Breaking appellant's argument into two parts, appellant first argues that (i) the recapture rule only requires that one compare the reissue claims with the original application claims prior to ever being amended due to a prior art rejection (i.e., the claims as of July 2, 1984). Br. at 20. Using this claim comparison,

appellant then argues that (ii) the recapture rule does not apply so long as the reissue claims are narrower than his original application claims in at least one significant respect. Br. at 21.

Appellant's new recapture argument should not be considered since it is made for the first time on appeal. Compare Br. at 14-16, 18-33 with A71-72 (appellant's appeal brief to the Board).[9]

The Supreme Court has stated, "Simple fairness to those who are engaged in the tasks of administration, and to litigants, requires as a general rule that courts should not topple over administrative decisions unless the administrative body not only has erred but has erred against objection made at the time appropriate under its practice." United States v. L.A. Tucker Truck Lines, 344 U.S. 33, 37 (1952). This Court has consistently followed this general rule set forth by the Supreme

---

[9] Appellant's recapture argument to the Board focused on the Burns reference and declaration:

> It is absolutely clear from the file history of the '179 patent that, rather than the claim amendments directed to temperature, mechanical energy and pH, the factor that finally resulted in the Examiner issuing a Notice of Allowance was the declaration submitted by Mr. Michael Burns on March 7, 1988. In his declaration, Mr. Burns stated unequivocally that the process disclosed in his paper could not possibly achieve the results obtained by the process disclosed by the applicant.

A72 (emphasis added).

Court. See, e.g., Sewall v. Walters, 21 F.3d 411, 417-18, 30 USPQ2d 1356, 1360 (Fed. Cir. 1994) (court refused to decide an issue not raised before the Board of Patent Appeals and Interferences). See also Chester v. Miller, 906 F.2d 1574, 1578 n.6, 15 USPQ2d 1333, 1337 n.6 (Fed. Cir. 1990) ("This court will not consider arguments that were not timely raised before the Board."); Wallace v. Air Force, 879 F.2d 829, 832 (Fed. Cir. 1989). Therefore, the Court should not consider appellant's new recapture arguments made for the first time on appeal.

Even if appellant's new argument is considered, the recapture rule applies since the reissue claims "are broader than the original patent claims in a manner directly pertinent to the subject matter surrendered during prosecution." See Mentor, 998 F.2d at 996, 27 USPQ2d at 1525. Appellant contends that only one piece of the voluminous prosecution history of the '179 patent is relevant in determining whether the recapture rule applies, i.e., claim 1 of the '623 application as amended on July 2, 1984. Appellant urges this Court to only look at this one "snapshot" of the claim, even though it was substantially amended several times thereafter. Appellant then asks this Court to essentially ignore all other prosecution history, including numerous statements made by him upon which the examiner relied.

The legal precedent regarding the recapture rule does not support appellant's restrictive approach. Quite to the contrary, the recapture rule requires

consideration of all relevant portions of the prosecution history to determine whether the patentee is attempting to regain though reissue that which he deliberately surrendered during prosection to avoid the prior art. See Mentor, 998 F.2d at 995-96, 27 USPQ2d at 1524-25; Ball, 729 F.2d at 1436, 1438, 221 USPQ at 296. Whether appellant deliberately surrendered claim scope early in prosecution or later in prosecution is irrelevant. Evidence of deliberate surrender of claim scope includes admissions by an applicant during prosecution (either expressed or implied) that claims of the scope now sought in reissue were not patentable over the prior art. See Ball, 729 F.2d at 1435, 221 USPQ at 294. A court looks to the changes in the claim scope alone only when there is no better evidence as to why a claim was amended or canceled. See Ball, 729 F.2d at 1436, 221 USPQ at 294. Each case depends on its own facts and particularly on the "reasons" for surrendering the subject matter that is sought through a broadened reissue. See Ball, 729 F.2d at 1438, 221 USPQ at 296. These reasons are drawn from changes in the claims, statements by the applicant, and statements by the examiner.

Here, appellant repeatedly and expressly stated to the examiner that his claimed method was not obvious in view of the prior art because of the unique process parameters that he incorporated into the claims. The parameters included

temperature, mechanical energy, and pH, the very parameters appellant now wishes the Court to eliminate from the claims.

Furthermore, for purposes of the two-year statutory period of Section 251, a claim is considered "broadened" if it is "broader in any respect than the original claim." In re Bennett, 766 F.2d 524, 525-26; 226 USPQ 413, 414 (Fed. Cir. 1985); Ball, 729 F.2d at 1438, 221 USPQ at 296. However, this "rigid" rule is not applied when considering whether to reject claims based on the recapture rule since recapture is based on equitable principles and fairness. See id. Rather, the recapture rule bars reissue claims if they are broader than the original patent claims "in a manner directly pertinent to the subject matter surrendered during prosecution." Mentor, 998 F.2d at 996, 27 USPQ2d at 1525; see Ball, 729 F.2d at 1438, 221 USPQ at 296 (claims that are only broader in a "non-material" aspect are not barred by the recapture rule).

The side-by-side comparison between claim 1 of the '179 patent and reissue claim 49 reveals that the reissue claim is broader in a manner "directly pertinent to the subject matter surrendered during prosecution." Mentor, 998 F.2d at 996, 27 USPQ2d at 1525. During the original prosecution, appellant added the temperature, mechanical energy, and pH limitations to avoid the prior art. Now through reissue, appellant wishes to broaden his claims by eliminating these material limitations. See id.

Even if it were appropriate to only compare reissue claim 49 with original claim 1 (July 2, 1984), the recapture rule would still apply. For example, the side-by-side comparison illustrates that appellant is attempting to broaden the parameters of step (a) from "low" temperature to essentially any temperature below the melting point of the non-ink contaminants. Compare A246 with A14. Similarly, in step (a) appellant is attempting to broaden from "low" specific mechanical energy to any specific mechanical energy that will form a pumpable slurry. Id. During prosecution, appellant argued that the temperature and mechanical energy properties of step (a) distinguished it over the prior art. See, e.g., A330, 379, 382. In fact, appellant continued to amend these parameters further (to "room temperature" and "specific mechanical energy lower than 50 KW.H/Ton") to avoid the prior art. A325, 379. The recapture rule bars appellant from broadening these material limitations that were added during original prosecution to avoid the prior art. See Mentor, 998 F.2d at 995-96, 27 USPQ2d at 1524-25.

Likewise, reissue claim 49 is broader than original claim 1 (July 2, 1984) since appellant has eliminated the following limitations from steps (c) and (d) of claim 1 (July 2, 1984): "(A) high temperature -between 85 and 130°C.-(B) high shear forces and (C) at least one de-inking agent, under alkaline conditions." Compare A247 with A14-15. Reissue claim 49 permits the use of any

temperature, any specific energy, under any pH conditions. Therefore, even if one were to use appellant's isolated claim comparison, the recapture rule would bar the reissue claims.

Appellant argues that reissue claim 49 is "materially narrower" than claim 1 (July 2, 1984). Br. at 26-31. For example, appellant points to the time limitations in step (c) and the brightness (ISO) limitation of step (d) of reissue claim 49, neither of which are present in claim 1 (July 2, 1984). Br. at 28-29. Appellant argues that since these limitations are present in reissue claim 49 and not in claim 1 (July 2, 1984), the reissue claims are narrower and the recapture rule does not apply. Appellant appears to be arguing that, since he added the time and brightness limitations after he added the temperature, mechanical energy and pH limitations, the recapture rule does not apply.

First, the side-by-side comparison reveals that the time and brightness limitations are also present in issued claim 1 of the '179 patent.[10] Appellant added these limitations to the claims in response to obviousness rejections. A325-26, 428. In addition, the prosecution history makes clear that, since the prior art disclosed the general process originally claimed, appellant added numerous process parameter limitations to overcome the prior art, which included

---

[10] This is true for each of the limitations appellant contends "narrows" reissue claim 49.

limitations with respect to temperature, mechanical energy, pH, time and brightness. Appellant's argument that since he added the time and brightness limitations after July 2, 1984, the recapture rule somehow does not apply is inconsistent on its face and unsupported by precedent. Appellant argues that he is entitled to eliminate any of the process parameter limitations he added to distinguish the prior art, so long as he does not eliminate them all. More specifically, appellant argues that since he is not eliminating the time and brightness limitations, he is free to eliminate the limitations with respect to temperature, mechanical energy, and pH. There is no authority that support's this argument and it directly conflicts with the purpose behind both the reissue statute and the recapture rule. See Ball, 729 F.2d at 1439 n.28, 221 USPQ 296 n.28 (reissue statute and the recapture rule are both based on "fundamental principles of equity and fairness").

Appellant essentially argues that it is irrelevant how broad a reissue claim is, so long as the reissue claim is "narrower in at least one significant respect." Id. Quite simply, appellant mischaracterizes the law regarding reissue to this Court. Reissue claims that have the same or broader scope as previously amended claims are barred by the recapture rule; reissue claims that are narrower in scope are not so barred. See, e.g., Ball, 729 F.2d at 1436, 221 USPQ at 295. Reissue claims of "intermediate" scope (i.e., broader in certain respects and narrower in others) are

barred by the recapture rule when the reissue claims "are broader than the original patent claims in a manner directly pertinent to the subject matter surrendered during prosecution." Mentor, 998 F.2d at 996, 27 USPQ2d at 1525. Put another way, the recapture rule does not bar reissue claims of intermediate scope where the broader features only "relate to an aspect of the invention that is not material to the alleged error supporting reissue." Ball, 729 F.2d at 1438, 221 USPQ at 296. See also Mentor, 998 F.2d at 996, 27 USPQ2d at 1525.

Both Mentor and Ball involved claims of intermediate scope. See Mentor, 998 F.2d at 996, 27 USPQ2d at 1525; Ball, 729 F.2d at 1438, 221 USPQ at 296. In Mentor, the claims related to a condom catheter. 998 F.2d at 993, 27 USPQ2d at 1523. The key limitation in the issued claim was an adhesive that was transferred from the outer surface to the inner surface of a catheter when it was unrolled. Id. at 993-94, 27 USPQ2d at 1523-24. The reissue claims did not recite the transfer of the adhesive from the outer to the inner surface of the catheter. Id. However as in this case, the prosecution history of the issued patent showed that the adhesive transfer limitation was added to overcome prior art rejections. Id. at 995-96, 27 USPQ2d at 1524-25. Therefore, the reissue claims that eliminated the adhesive transfer limitation were barred based on the recapture rule. Id. The Court so ruled despite the fact that the reissue claims were narrower in other respects since the narrower limitations were not material to the adhesive transfer

limitation applicant was attempting to eliminate from the claims. Id. at 995-96, 27 USPQ2d at 1525-26.

In Ball, the Court allowed reissue claims of intermediate scope. 729 F.2d at 1438, 221 USPQ at 296. However, in Ball, the reissue claims were narrower than the canceled claims in all respects, except one (i.e., the shape configuration of the antenna). Id. at 1437-38, 221 USPQ at 295-96. The Court determined that this single, broader aspect did not bar reissue since the claims were "fundamental[ly] narrow[er]" than the canceled claims. Id. at 1438, 221 USPQ at 2996. In addition, unlike this case, there was no evidence in the record indicating the patentee argued that his claims were distinguishable over the prior art based on this configuration limitation. Id. Therefore, the Court did not invalidate the reissue claims.[11]

---

[11] Similarly, in In re Richman, 409 F.2d 269, 275, 161 USPQ 359, 363 (CCPA 1969), the Court allowed the reissue claims after it determined that the reissue claim limitations were "significantly more limited" than the limitations of the canceled claims (i.e., both the control signal and the operation of the circuit in the reissue claims were more restrictive than their corresponding limitations in the canceled claims). The Court stated that each of the reissue claims at issue was "more restrictive in at least one significant respect than the canceled claims." Id.

(continued...)

Therefore, even the authority relied on by appellant does not support his proposition, that regardless of how broad his reissue claims are and how many limitations he is attempting to recapture, the recapture rule does not bar his reissue claims so long as they are narrower in one, and only one, significant respect. On the contrary, the recapture rule bars reissue claims that are materially broader where there is evidence of surrender to avoid the prior art, even though the reissue claims may contain other narrowing limitations that are not related to the subject matter that is being recaptured. See Mentor, 998 F.2d at 996, 27 USPQ2d at 1525; Ball, 729 F.2d at 1438, 221 USPQ at 296. Therefore, appellant's argument fails.

E. The reissue claims were properly rejected based on appellant's defective reissue declaration

A reissue application must include a reissue declaration specifying two types of error: (1) error in the patent; and (2) error in conduct. 37 C.F.R. § 1.175; Hewlett-Packard, 882 F.2d at 1564, 11 USPQ2d at 1758. The declaration must distinctly specify every difference between the original and reissue claims. In re Constant, 827 F.2d 728, 729; 3 USPQ2d 1479, 1480 (Fed. Cir. 1987); see 37

---

[11](...continued)
at 276, 161 USPQ at 364. The Court found that there was no evidence in the prosection history of the issued patent that the applicant was attempting to regain the same subject matter of the canceled claims. Id.

C.F.R. § 1.175. Moreover, the declaration requires an explanation as to how and when each of the errors in conduct arose and how and when each of the errors were discovered. 37 C.F.R. § 1.175; Hewlett-Packard, 882 F.2d at 1565, 11 USPQ2d at 1758.

1. Appellant's reissue declaration is defective

Appellant's reissue declaration filed in support of the '951 reissue declaration is defective since it: (i) fails to address all of the alleged errors, (ii) fails to sufficiently explain how and why the errors occurred, and (iii) fails to sufficiently explain how and when the errors were discovered. A36-43.

Although the reissue declaration mentions the error regarding "room temperature" for step (a), it never refers to the "room temperature" error in step (b). A39. Step (b) of issued claim 1 requires that the "screening and cleaning" processes be conducted "at room temperature." A24, col. 13, lines 7-8. Proposed reissue claim 49 has no temperature requirement in step (b) for the screening and cleaning steps. A14. However, the reissue declaration fails to properly address this "error." See A36-43.

More importantly, appellant's explanations regarding how and when the errors occurred and how and when they were discovered is inadequate. See Hewlett-Packard, 882 F.2d at 1565-66, 11 USPQ2d at 1758. First, with respect to the cause of the errors, appellant primarily blames them on communication

difficulties between him and his U.S. attorneys, and on his U.S. attorney's failure to fully appreciate the scope of his invention. See A41. However, although the Court has held that in certain circumstances misunderstandings by an attorney may be sufficient cause for error, see Mentor, 998 F.2d at 995, 27 USPQ2d at 1524, this is not such a case for several reasons.

For example, in his '951 declaration appellant states that the errors "occurred prior to 1987 during the early prosecution of the '943 application." A41 (emphasis added). However, as the Board correctly noted, certain limitations that appellant now wishes to eliminate from claim 1 were present in the original claims of the '623 application, and thus could not have been due to communication difficulties during prosecution. A6.[12] In addition, appellant actively participated throughout the original prosecution of the '179 patent. For example, on January 27, 1986, appellant filed a declaration (signed by him) where he attempted to distinguish his claimed invention from another paper recycling

---

[12] Most of these specific process limitations -- which appellant asserts arose due to poor communication with his U.S. attorneys -- also appear in the claims of the French-language European Patent Application (0092124) which was filed three days after the original '623 application. SA9, 38 (translation on pages SA51-52). The PCT application was filed by a European firm (Id.) and the record indicates appellant is a French citizen. A135.

process. A298-315. Similarly, on July 1, 1987, appellant submitted another declaration (signed by him) where he attempted to distinguish his invention from the prior art. A367-77.

The '951 declaration is also inconsistent with the declaration appellant filed in support of the parent '012 reissue application as to how and when the errors were discovered. In his earlier '012 reissue declaration (dated October 18, 1990), Mr. Clement stated that he first discovered the errors after he "had an opportunity to completely analyze the text of the patent," which issued on October 25, 1988. A133. However, over two and one-half years later in his '951 reissue declaration (dated April 27, 1993), Mr. Clement stated that he discovered the errors only after meeting with his U.S. attorneys on "April 22, 1993." A38 (emphasis added). Thus, the mere comparison of the two declarations, illustrates additional inadequacies as to "how" and "when" the errors were discovered (e.g., did appellant discover the errors by (i) reading the patent sometime between 1988 and 1990, or (ii) by talking to his U.S. attorneys in April, 1993).

2. Appellant has failed to show that the Board erred in rejecting his reissue claims based on his defective reissue declaration

Appellant argues that the '951 reissue declaration is not defective. Br. at 39-43. Appellant first argues that the discussion in his declaration regarding the "room temperature" in step (a) is sufficient for the "room temperature" errors in

both steps (a) and (b). However, the "room temperature" limitations in steps (a) and (b) deal with entirely different parts of the process (step (a) deals with forming the first aqueous fibrous suspension at "room temperature"; step (b) deals with screening and cleaning at "room temperature"). In addition, during original prosecution, the two "room temperature" limitations were added by two different amendments almost three years apart: the "room temperature" limitation of step (a) was added by amendment on July 9, 1985, (A259; Br. at 7); the "room temperature" limitation of step (b) was not added by amendment until May 16, 1988 (A428). Therefore, appellant's declaration is insufficient.

In addition, appellant argues that his broad statement regarding "communication difficulties" should be sufficient. Br. at 42-43. However, given the record in this case, and given the significant participation by appellant himself, the Board properly found this statement inadequate. Moreover as noted earlier, appellant's '951 reissue declaration is inconsistent with his '012 reissue

declaration.[13] Finally, since reissue is inappropriate to correct the types of errors alleged, the declarations are not curable.[14]

---

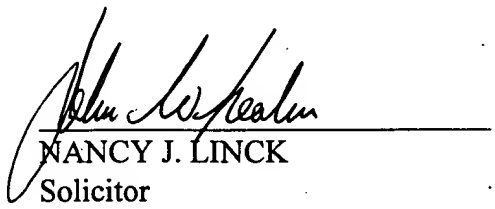
[13] Appellant has never sought to supplement his reissue declaration pursuant to 37 C.F.R. 1.175(a)(6). In addition, since the proposed rule changes relied on by appellant have never been adopted (Br. at 44), appellant's reliance on a rule that was not in effect during prosecution is misplaced.

[14] The Commissioner agrees with appellant that the defective declaration does not, in and of itself, invalidate the carry over claims from the '179 patent (i.e., claims 1-18). See Hewlett-Packard, 882 F.2d at 1567, 11 USPQ2d at 1759.

V. CONCLUSION

Appellant has failed to demonstrate that the Board committed any reversible error in rejecting the reissue claims based on (i) the recapture rule, and (ii) his defective reissue declaration. Therefore the decision should be affirmed.

Respectfully submitted,



NANCY J. LINCK
Solicitor

ALBIN F. DROST
Deputy Solicitor

JOHN M. WHEALAN
SCOTT A. CHAMBERS
Associate Solicitors

P.O. Box 15667
Arlington, Virginia 22215
703-305-9035

Attorneys for the Commissioner
of Patents and Trademarks

May 13, 1997

SUPPLEMENTAL APPENDIX

TABLE OF CONTENTS

1. Patents ⇐168(2.1)

Whenever prosecution history estoppel is invoked as a limitation to infringement of patent under doctrine of equivalents, close examination must be made as to not only what was surrendered, but also reason for such a surrender.

2. Patents ⇐168(2.2)

Claim change that did not in fact determine patentability does not create prosecution history estoppel.

3. Patents ⇐168(2.2)

When patent claim changes or arguments are made in order to more particularly point out applicant's invention, changes do not raise prosecution history estoppel.

4. Patents ⇐237

Holder of patent relating to method of treating waste paper to produce paper pulp limited his claims to specify cleaning of "substantially all" non-ink contaminants from first aqueous fibrous suspension, and thus patent was not infringed under doctrine of equivalents by process in which non-ink contaminants were removed downstream of disperser.

5. Patents ⇐168(2.6)

Concession made or position taken to establish patentability in view of prior art on which examiner has relied is a substantive position on technology for which patent is sought and will generally generate an estoppel.

KAMYR, INC., Plaintiff,

v.

Jean Marie CLEMENT, Defendant.

Civil Action No. 94-2234 (JR).

United States District Court, District of Columbia.

Jan. 31, 1997.

Patentee brought action for infringement of patent relating to method of treating mixture of printed and contaminated waste paper in order to produce paper pulp. Alleged infringer moved for summary judgment. The District Court, Robertson, J., held that accused process did not infringe patent under doctrine of equivalents.

Motion for summary judgment granted.

Robert A. Vanderhye, Nixon & Vanderhye P.C., Arlington, VA, for Plaintiff.

Michael F. Urbanski, William B. Poff, Paul C. Kuhnel, Woods, Rogers & Hazlegrove, P.L.C., Roanoke, VA, for Defendant.

MEMORANDUM

ROBERTSON, District Judge.

This memorandum sets forth the reasons for the order, issued today, granting the motion of Kamyr, Inc. for summary judgment and declaring that the processes employed in Kamyr-outfitted recycle papers mills in Indiana and West Virginia do not

infringe U.S. Patent 4,780,179 (the '179 patent).

Background

Kamyr, Inc. is a Delaware corporation with its principal place of business in New York. It supplies equipment and engineering services in the pulp and paper field. Kamyr and its parent, A. Ahlstrom Corporation of Finland, manufactured most of the equipment for producing pulp from printed waste paper and designed most of the processes that are the subject of the claims and counterclaims presented in this case.

Jean Marie Clement is a citizen of France and a resident of Italy. He is the owner of the '179 patent, which was issued on October 25, 1988. The '179 patent relates to a method of treating a mixture of printed and contaminated waste paper in order to produce paper pulp.

In letters to Kamyr and in a communication with Kamyr's Indiana customer, Clement charged that Kamyr's equipment for making recycled paper pulp, and the customer's use of that equipment, infringed the '179 patent. Clement threatened both Kamyr and its customer with suit for patent infringement. Kamyr thereupon brought this action for declaratory judgment, denying that it had infringed any of the claims of the '179 patent and asserting that, if the claims of the patent should be interpreted to cover any of Kamyr's equipment, material or activity, then the patent claims are invalid and unenforceable.

The paper recycling system in question is an industrial process by which waste paper is converted to cleaned, recycled pulp. In the Kamyr process, incoming waste paper is moved by conveyer belt to a large drum pulper, then fed in a slurry form through a "deflaker pump," a cleaner, screens, a dewatering process and a pulp press. The mixture is then fed into a bleaching tank, another pulp press and a shredder, another bleach tower, and then a deinking system, a fine screen, centrifugal cleaners, and additional pulp presses, before being delivered at the output end of the line.[1]

The first claim of Clement's patent is to

> "a method of treating a mixture of printed and contaminated waste paper in order to produce a pulp for use in the manufacture of paper and paperboards, said waste paper containing non-ink contaminants including stickies...."

The claimed method comprises six steps, set forth at Exhibit 1–12–13, and summarized for purposes of this motion as follows:

Step A Forming a first aqueous fibrous suspension at room temperature to form a pumpable slurry and

> "to release substantially all of the non-ink contaminants including the stickies from the surface of the paper ... without dispersing such non-ink contaminants as finely divided particles...."

Step B Removing non-ink contaminants including stickies[2] by screening and cleaning at room temperature to form a second aqueous fibrous suspension substantially free of the non-ink contaminants including the stickies. *Step C* "Softening the ink vehicles and weakening their binding with the surface of the fibers" by subjecting the slurry to the simultaneous action of high temperature (between 85 degrees and 130 degrees Centigrade), high shear forces, and a de-inking agent. *Step D* Detaching the ink particles by the same process specified in Step C. *Step E* "Limiting the total duration of the ink softening and detaching steps (c) and (d) to a range between 2 and 10 minutes." *Step F* Removing the detached ink particles from the slurry to provide a brightness of at least 59 ISO in the final pulp.

Clement's motion for a summary judgment of liferal infringement was all but abandoned at oral argument and must be denied: the temperatures for various steps of the two processes differ (the Clement process uses no added heat at the beginning and high temperatures later, while Kamyr adds heat

1. The two Kamyr-outfitted plants upon which the parties focused their discovery have slightly different processes. The differences are not important to the analysis set forth in this memorandum, however.

2. Stickies are thermo-sensitive contaminants from the pulp which have low melting points, such as binders and plastics.

at the beginning and none later); residence times specified by the two processes are different; the Kamyr process screens and cleans downstream of the disperser, while the Clement process does not; the Kamyr process employs a device called the Frotapulper, which does not accomplish a simultaneous action of high temperature, high shear force and chemical de-inking; and the Kamyr and Clement processes are designed to produce different end products (Clement's process is designed to make pulp with a brightness of at least 59 ISO from relatively low quality waste paper, while Kamyr's is designed to achieve a brightness of 80 ISO from higher quality waste paper).

Clement insists, however, that the Kamyr process infringes by the doctrine of equivalents and demands a jury trial upon the authority of *Hilton Davis Chemical Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512 (Fed. Cir.1995) (*en banc*), *cert. granted*, — U.S. —, 116 S.Ct. 1014, 134 L.Ed.2d 95 (1996). The argument is that, notwithstanding the differences noted above, the function, way and result of the Kamyr process is essentially the same as that of the '179 patent—temperatures at the initial pulping step low enough that stickies do not melt and mechanical energy gentle enough that they are not dispersed and can be screened out; and then high temperature, mechanical energy and chemical action to soften and remove inks only after substantially all the stickies have been removed. That function, way and result, Clement urges, does not depend on the exact temperature of the initial steps, as long as the temperature is low enough that stickies are not melted. Nor does it require that the "thermo-chemi-mechanical treatment" claimed by the '179 patent be simultaneous, or that heat be added to raise the temperature at this stage of the process, or that the slurry "residence times" fall within the range specified by the '179 patent.

Kamyr's answer to Clement's invocation of the doctrine of equivalents is prosecution history estoppel: Clement is not entitled to expand the literal scope of his claims by claiming equivalents, Kamyr argues, because the prosecution history of the '179 patent demonstrates that the limitations of his claim were necessary to the allowance of the patent.

Clement denies that he is estopped by the prosecution history to claim infringement under the doctrine of equivalents and argues that the claim limitations that emerged from the prosecution of his patent were not required to distinguish his claims from prior art.

The differences between the Clement and Kamyr processes noted above are so fundamental as to raise serious doubt whether a reasonable jury could find them equivalent in function, way, or result. It is not necessary to reach that question, however, if Kamyr's assertion of prosecution history estoppel entitles Kamyr to a summary judgment of noninfringement.

The briefs and oral arguments of the parties have focused the dispute on four factual issues:

1. Whether the temperature of the initial steps of the Kamyr process is the equivalent of the room temperature specified in *Step A* of the '179 patent (and whether Clement is estopped to claim equivalence);

2. Whether Kamyr's removal of most non-ink contaminants ("stickies") at the initial stage of its process is equivalent to the removal of "substantially all" stickies at *Step B* of the '179 patent (and whether Clement is estopped);

3. Whether the Kamyr process uses the equivalent of the ink softening and removal process done in *Steps C and D* of the '179 patent (and whether Clement is estopped); and

4. Whether residence times used in the Kamyr process are equivalent to the 2 to 10 minute range specified in *Step E* of the '179 patent (and whether Clement is estopped).

Prosecution History

Clement's first claim was file-stamped in the Patent and Trademark Office April 6, 1983. Exhibit 2–5.[3] On March 29, 1985, the Examiner rejected all of the claims as obvi-

3. The reference is to Exhibits to Kamyr's Motion for Summary Judgment. Exhibit 2 is the certified file wrapper and contents. The claim is at page 5 of Exhibit 2.

ous over Ortner (U.S. Patent 4,360,402) in view of Raymond (U.S. Patent 3,849,246) and Eriksson (U.S. Patent 3,957,572). On July 9, 1985, Clement amended his claims. Exhibit 2–59. On August 22, 1985, the Examiner again rejected the claims as unpatentable over Ortner, *et al.* in view of Raymond, *et al.* and Eriksson. Exhibit 2–71. Clement then filed a file wrapper continuing application on January 27, 1986 together with preliminary amendments. Exhibit 2–118. The claims were again rejected, on September 11, 1986, as obvious over an article by M.P.H. Burns alone or in view of Eriksson. Exhibits 2–173–182. On January 13, 1987, another amendment was filed. Exhibit 2–183. That amendment was rejected as well, Exhibit 2–194, after which Clement's attorney met with the Examiner. Exhibit 2–209. Additional amendments were then filed. Exhibit 2–223. After the Examiner's final rejection of the claims on April 8, 1987, Clement filed a notice of appeal and an appeal brief. On May 5, 1988, after the appeal was fully briefed, the Examiner and Clement's counsel agreed that, if the claims were amended to be commensurate with the arguments presented in Clement's appeal brief, they would be allowable.

Over the course of this prosecution history, Clement's claims were narrowed significantly.

Step A. Clement's initial claim called for early-stage pulping at "low temperature." Exhibit 2–29. In the Examiner's initial rejection, that term (along with others) was rejected as "too relative to be capable of any fixed meaning." Exhibit 2–57. Clement then amended it to "room temperature." Exhibit 2–61. He also changed the cleaning and screening step from "ambient temperature" to "room temperature."[4] The "room temperature" limitation was later added to the screening and cleaning step (Step B). Exhibit 2–224. Kamyr now argues that "room temperature" is a scientific term with a standard meaning and points out that, in the Kamyr process, the temperature at which the initial pulping, screening and cleaning processes are done is higher than the 20–25 degree Centigrade range normally considered to be room temperature. Clement responds that "room temperature" is not a defined term; that "so long as the temperature is not sufficiently high to melt the stickies, and is lower than the pulp temperature in the MDR disperser, the temperature is not critical;" and that any temperature in the Kamyr process within that range is at least subject to scrutiny by a jury under the doctrine of equivalents.[5]

Step B. The "primary reason" for the allowance of the '179 patent was Clement's limitation of his claims to distinguish his process from *Burns:*

> "Burns clearly cleans non ink contaminants from his stock after the dispersal unit and flotation as well as before the dispersal unit *whereas applicant cleans only before the disperser,* which is claimed in step (b) via cleaning substantially all the non ink contaminants...." Exhibit 2–276–7 (emphasis added).

It is not disputed that the Kamyr process removes most non-ink contaminants—on the order of 97–98 percent—at the initial stage, but Kamyr insists that removing "most" is not the equivalent of removing "substantially all." Kamyr urges that Clement's limitation to "substantially all" meant "all" and points out that the Kamyr process, unlike Clement's, screens and cleans *downstream* of Step B.

The prosecution history is instructive. Clement's amendment filed July 9, 1985, distinguishes his process from Ortner, pointing out that Ortner separates ink particles by chemical action, a "feeble and short mechanical action," and flotation, while in Clement's process "all the non-fibrous contaminants are separated at room temperature and before the thermo-chemi-mechanical treatment takes place...." Exhibit 2–64–5. An examiner interview summary dated April 17, 1987, records the argument of Clement's representative that Burns "does not eliminate *all* non

4. The suggestion was made at oral argument that change from "ambient" to "room" temperature was made because "ambient" is a French word that was not fully understood by the Examiner.

5. Clement did not propose a jury instruction to implement his legal theory that "one must determine whether the temperatures are equivalent from the point of view of a stickie, not a human."

ink contaminants before the ink dispersing step" and his proposal of a claim "limited to removing *all* non ink c[ontaminants] before the disperser step" so that the second aqueous fibrous suspension would be "substantially free of non-ink contaminants...." Exhibits 2–210–11. This change is reflected in handwritten notes on an amendment filed June 29, 1987, Exhibit 2–224, and argued at length in the "remarks" section of the same submission. Exhibits 2–227–9. The "fundamentally different" approach Clement claims is the removal of non-ink contaminants from the pulp before the deinking step, without dispersing them as finely divided particles throughout the first fibrous suspension:

> "This is accomplished at relatively low temperatures through the application of mechanical energy. Once the non-ink contaminant are [sic] released from the surface of the fibers, they are removed from the first fibrous suspension substantially free of non-ink contaminants. When the second aqueous fibrous suspension reaches the kneader where the ink contaminants are removed from the pulp, the high temperatures required for this step of the process will not cause any 'stickies' to readhere to the surface of the fibers together with the ink contaminants, because no non-ink contaminants are present."

Again, in Clement's appeal brief filed September 30, 1987:

> "The fundamental distinction between the Burns process and the present invention is that in the Burns process both the non-ink contaminants such as binders, hot melts, plastics and other 'stickies' and the ink-based contaminants are removed from the surface of the pulp fibers in the dispersal unit at the same time. In contradistinction, Applicant removes substantially *all* of the non-ink contaminants prior to the removal of the ink-based contaminants in the dispersal unit."

Steps C and D. In remarks accompanying his July 9, 1985 amendment, Clement was at pains to distinguish the "thermo-chemi-mechanical treatment" stage of his process from Eriksson, which, he argues,

> "does not teach the combined use of high temperature, intense mechanical energy and chemical action for a short period of time in order to prepare the ... contaminants to be removed. As a matter of fact, the material is simply treated within a kneading apparatus (Frotapulper) and discharged at a final temperature of about 70–90 C, without the use of any chemical dispersing agent. Furthermore, [Eriksson] provides for the application of just one type of energy (mechanical), while the increase of the temperature is only due to the internal mechanical friction...." Exhibit 2–67.

The "thermo-chemi-mechanical treatment" upon which Clement relies to avoid Eriksson (dispersal in a Frotapulper without added heat) is not part of the Kamyr process. Kamyr's processes employ the Frotapulper after pulping, screening and cleaning, without the application of any heat source except the heat generated by mechanical energy, and without the simultaneous application of chemicals.

Step E. In his July 9, 1985, amendment, Clement limited his "thermo-chemi-mechanical treatment" to "less than 10 minutes" and recited that "the total duration of the ink releasing and dispersing treatment [was] kept between 2 and 10 minutes." Exhibits 2–61–62. Kamyr asserts, and Clement does not deny, that the limitation of 10 minutes at the upper end of the range was necessary to avoid the Ortner patent. See Exhibits 2–56, 2–61, 2–136. The focus of the parties is at the lower end of the range. At the Kieffer and AMR installations using Kamyr's process, the durations of the step that Clement claims as infringing were measured at 1 minute 23 seconds and 49 seconds, respectively.

Analysis

[1] Whatever the fortunes of the *Hilton Davis* decision in the Supreme Court, it will remain the latest and most authoritative starting point for analysis of a prosecution history estoppel claim, 62 F.3d at 1525:

> "Whenever prosecution history estoppel is invoked as a limitation to infringement under the doctrine of equivalents, a close examination must be made as to, not only what was surrendered, but also the reason

for such a surrender." (internal citations and quotes omitted).

In that case, a limitation of "from approximately 6.0 to 9.0" in pH was found to be open to a doctrine of equivalents claim and not estopped by prosecution history because, although the 9.0 pH upper limit had been selected to distinguish the claims in that case from prior art, there was no indication that the 6.0 pH had been argued as a distinguishing feature, or that a pH lower than 6.0 was in the prior art.

[2] The application of *Hilton Davis* to the facts of this case is most clearly seen in the dispute over the 2–10 minute time range specified in Clement's Step E. Kamyr asserts that Clement specifically argued the lower limit of 2 minutes in order to distinguish his claims from prior art. That assertion does not find support in the file wrapper citations Kamyr provides for that proposition. Exhibits 2–65, 2–134, 2–136, 2–243. Kamyr goes on to argue, however, that its invitation of file wrapper estoppel on this point has a "coup de grace"—that Clement had to specify 2 minutes as the shortest time for his "thermo-chemi-mechanical treatment" because otherwise his claims would have read on the prior art of Eriksson. That argument cannot be sustained either. The Eriksson patent 3,957,572 claims only a "dwelling time ... shorter than the time necessary for complete impregnation of the paper with water and just sufficient for pumpability...." A residence time of less than 2 minutes does not appear to have been a subject of argument or discussion between Clement and the Examiner.[6] "[A] change that did not in fact determine patentability does not create an estoppel." *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1219 (Fed.Cir.1995); *Laitram Corp. v. NEC Corp.*, 952 F.2d 1357, 1361 (Fed.Cir.1991).

[3] Kamyr fares no better with its estoppel argument addressed to Clement's claim that the temperature of Kamyr's initial step is equivalent to that of the '179 patent process. The prosecution history establishes that the Examiner required Clement to use terms more specific than "low temperature," but it does not reflect a requirement by the Examiner or an intent by Clement to specify any particular temperature in order to overcome prior art. "[W]hen claim changes or arguments are made in order to more particularly point out the applicant's invention, the purpose is to impart precision, not to overcome prior art. Such prosecution is not presumed to raise an estoppel...." *Pall Corp.*, 66 F.3d at 1220; *Mannesmann Demag Corp. v. Engineered Metal Products Co.*, 793 F.2d 1279, 1285 (Fed.Cir.1986).

[4, 5] A prosecution history estoppel does arise, however, with respect to Clement's claim that the Kamyr process infringes the '179 patent by removing most of the non-ink contaminants from the first aqueous fibrous suspension. The allowance of Clement's patent turned on Clement's willingness to limit his claims to specify cleaning of "substantially all" the non-ink contaminants at this stage—and none downstream of the disperser. This limitation of Clement's earlier, broader claims, and its importance, was made explicit by the Examiner. Exhibits 2–276–77. "[A] concession made or position taken to establish patentability in view of prior art on which the examiner has relied, is a substantive position on the technology for which a patent is sought, and will generally generate an estoppel." *Pall Corp.*, 66 F.3d at 1220.

The parties have briefed this issue as a contest about the meaning of a few words and phrases: "substantially all," "most," and "all." The correct question is a different one: whether, in order to avoid the prior art of Burns, Clement surrendered his claim to a process that involved screening and cleaning

6. It is true that the '179 patent specifies a precise time range, unlike the pH range in *Hilton Davis*, which had an "approximate" lower limit. Kamyr's argument on this point, however, falls under the rubric of the doctrine of equivalents and not prosecution history estoppel. If Clement were permitted to proceed to trial under the doctrine of equivalents, there might well be a genuine issue of fact with respect to the equivalence of residence times, because Clement argues that Kamyr uses two residence times that should be accumulated for purposes of comparison, or because the actual parameters in use at the Kamyr process plants are disputed, or for both reasons.

downstream of the disperser. The prosecution history establishes that he did.

The creation of an estoppel is not necessarily fatal to a claim of infringement under the doctrine of equivalents. In *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1363 (Fed.Cir.1983), the Federal Circuit observed that,

> "Depending on the nature and purpose of an amendment, it may have a limiting effect within a spectrum ranging from great to small to zero. The effect may or may not be fatal to application of a range of equivalents broad enough to encompass a particular accused product. It is not fatal to application of the doctrine itself."

In this case Clement's infringement counterclaim attempts " 'to reclaim the very thing [he] surrendered by way of amendment,' " *Mannesmann*, 793 F.2d at 1285, and is fatal to his claim that the limitations of Steps A and B of his claim are found in the Kamyr process. Clement cannot prevail on his claim of infringement unless he establishes that *every* limitation of his claim is found in the Kamyr process, either literally or under the doctrine of equivalents, *SmithKline Diagnostics v. Helena Laboratories Corp.*, 859 F.2d 878, 889 (Fed.Cir.1988); *Lemelson v. United States*, 752 F.2d 1538, 1551 (Fed.Cir.1985). It follows that Clement's claim of infringement must be dismissed.

Findings and Conclusions

During the prosecution of the '179 patent, Clement limited his step (b) claim. The claim of removing non-ink contaminants including stickies by screening and cleaning to form a second aqueous fibrous suspension "substantially free" of non-ink contaminants including stickies is construed, in the light of the patent and its prosecution history, to mean that so nearly all of the non-ink contaminants are screened and cleaned from the first aqueous fibrous suspension that no screening and cleaning is done downstream of the disperser. The Kamyr process removes most but not all non-ink contaminants at step (b), and it does screen and clean downstream of the disperser. Clement's surrender of the broader claim during prosecution was critical to the allowance of his patent and estops his argument that the Kamyr process infringes the '179 patent by the doctrine of equivalents.

ORDER

Upon consideration of plaintiff's motion for summary judgment, it appearing for the reasons set forth in the accompanying memorandum that there are no genuine issues of material fact and that plaintiff is entitled to judgment as a matter of law, it is this 31st day of January, 1997,

ORDERED that plaintiff's motion for summary judgment [# 25] is **granted.** It is further

ORDERED that defendant's motion for leave to file amended counterclaim [# 34] is **denied.** And it is

FURTHER ORDERED that defendant's counterclaim [# 6] is **dismissed.**

FORM PTO 55 (12-80)

U. S DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

May 9, 1997
(Date)

THIS IS TO CERTIFY that the annexed is a true copy from the records of this office of European Patent Application No. 0,092,124.

By authority of the
COMMISSIONER OF PATENTS AND TRADEMARKS

Maryann P Wellman

Certifying Officer.

SA 000008

(19) European Patent Office
Office européen des brevets

(11) Numéro de publication: **0 092 124**
A1

(12) DEMANDE DE BREVET EUROPEEN

(21) Numéro de dépôt: **83103460.8**

(22) Date de dépôt: **09.04.83**

(51) Int. Cl.³: **D 21 C 5/02**, D 21 B 1/32

(30) Priorité: **19.04.82 IT 6751482**

(43) Date de publication de la demande: **26.10.83**
Bulletin 83/43

(84) Etats contractants désignés: **AT BE CH DE FR GB IT LI LU NL SE**

(71) Demandeur: **Clement, Jean Marie, Via Monterosa 75, I-20149 Milano (IT)**

(72) Inventeur: **Clement, Jean Marie, Via Monterosa 75, I-20149 Milano (IT)**

(74) Mandataire: **Buzzi, Franco et al, c/o Jacobacci-Casetta & Perani S.p.A. Via Alfieri, 17, I-10121 Torino (IT)**

(54) Procédé de production de pâtes à papier partant d'un mélange de vieux papiers imprimés non sélectionnés.

(57) Un procédé de recyclage de vieux papiers imprimés non sélectionnés contenant toutes sortes d'impuretés prévoit le décrochage de tous les contaminants des fibres et ensuite leur élimination de la suspension fibreuse de façon à produire une pâte réutilisable pour la fabrication de papiers et cartons.

De tels traitements permettent dans un premier temps de séparer et éliminer tous les contaminants sauf l'encre, et dans un second temps de décrocher l'encre de la surface des fibres et de l'éliminer de la suspension fibreuse.

De tels traitements sont destinés à permettre aussi bien la réutilisation à des fins papetières nobles de la masse fibreuse et des charges minérales contenues dans les effluents du lavage en tant que procédé de désencrage, que le recyclage de ces mêmes effluents ainsi débarassés de leurs solides en suspension afin de réaliser l'action de lavage de la masse fibreuse à désencrer.

Ce procédé comprend une succession de traitements chimiques et thermo-mécaniques en milieu tout d'abord alcalin, qui peut devenir neutre à la fin du procédé.

EP 0 092 124 A1

"Procédé de production de pâtes à papier partant d'un mélange de vieux papiers imprimés non sélectionnés"

La présente invention concerne un procédé pour le traitement des vieux papiers imprimés non sélectionnés en vue de leur recyclage.

Le recyclage des vieux papiers imprimés pour la fabrication du papier ou du carton est possible seulement après élimination de la masse fibreuse à traiter de la plupart des contaminants non fibreux qui y ont été introduits lors des différentes phases successives d'impression (carbone, pigments, liquides huileux véhicules de l'encre, résines de fixation, etc...) et lors des manipulations successives (couchage, laquage, reliure, plastification, emballage, etc...) et ensuite durant les phases de récupération (contamination par objets métalliques, plastiques, terre, souillures diverses).

L'élimination des contaminants a lieu par ordre chronologique dimensionnel, à travers différentes phases de passage sur tamis, triage manuel, magnétique, initialement à sec et ensuite en dispersion aqueuse.

La masse fibreuse ainsi dispersée est ensuite épurée des contaminants plus petits en un ou plusieurs étages d'épurateurs à tamis, centrifuges ou centripètes, utilisant les différences dimensionnelles ou de poids spécifique entre les contaminants et les fibres cellulosiques.

L'élimination de l'encre est effectuée en deux phases : (1) une phase de décrochement du mélange liant-pigment de la surface des fibres grâce à l'action simultanée d'agents de décrochage (savons, détergents,

tensio-actifs), de la température, de la pression, et des forces mécaniques de cisaillement, dans un milieu alcalin qui favorise la sensibilisation de la paroi fibreuse par gonflement et ramolissement, et (2) une phase d'élimination de la suspension fibreuse des produits décrochés lors de la phase précédente.

En général, le décrochage des contaminants et de l'encre d'imprimerie de la surface des fibres est effectué lors de la mise en suspension aqueuse des vieux papiers. Ces derniers sont défibrés dans un appareil communément appelé pulpeur, en présence de soude caustique, d'agents de désencrage, de tensio-actifs, d'oxydants, à une température comprise entre 50 et 60°C.

Dans une variante proposée par la société Voith, la pâte défibrée est épaissie à environ 15% et mélangée alors aux produits chimiques de désencrage et de blanchiment, et portée à environ 60°C. Cette pâte est ensuite abandonnée pendant 2 à 3 heures dans un tour de réaction sans être soumise à aucune sorte d'agitation.

Un premier inconvénient de ces procédés est dû au fait que tous les contaminants sont soumis au traitement thermique, y compris ceux qui présentent un bas point de fusion, tels que les adhésifs, les cires, les colles de reliure. Ces contaminants se disperseront donc dans la pâte et ne pourront plus être éliminés par les procédés classiques qui ont lieu à température plus basse, car ils se seront déjà refixés sur les fibres. Par contre, ils réapparaîtront sous forme de dépôts collants sur les racles des cylindres sécheurs de la machine à papier, ou sur les surfaces métalliques froides des tu-

REVENDICATIONS

1. Procédé de traitement de vieux papiers imprimés et contaminés en vue de leur recyclage pour la fabrication de papiers ou de cartons, caractérisé en ce que la matière première subit les traitements suivants :

a) défibrage en milieu aqueux de préférence à pH neutre ou peu alcalin, à froid ou température ambiante, par application d'une faible énergie spécifique de façon à produire une suspension fibreuse pompable dans laquelle les contaminants autres que l'encre ont été décrochés mais non dispersés dans la masse fibreuse ;

b) élimination des contaminants autres que l'encre de la masse fibreuse par des seuls moyens mécaniques, excluant toute forme de flottation ou d'extraction par solvant ou tout autre procédé chimique, en utilisant des épurateurs conventionnels centrifuges ou à classage, et sans ultérieure application de forces d'agitation violentes ;

c) ramollissement des véhicules de l'encre d'imprimerie et affaiblissement de leurs liaisons avec la surface des fibres en soumettant la pâte, à une concentration supérieure à 15%, aux actions simultanées de (A) la haute température - entre 85 et 130°C -, (B) intenses forces de cisaillement et (C) au moins un agent chimique de désencrage, le tout en présence d'une forte alcalinité ;

d) décrochage des particules d'encre de la surface des fibres et mise en dispersion fine et stable de ces particules au sein de la masse fibreuse

grâce aux actions simultanées de (A) la haute température - entre 85 et 130°C - (B) très intenses forces de cisaillement et (C) au moins un agent chimique de dispersion, le tout en présence d'une forte alcalinité ;

e) élimination des particules d'encre ainsi décrochées et mises en dispersion, par le moyen connu le plus approprié et selon la blancheur requise par l'utilisation finale de la pâte.

2. Procédé selon la revendication 1 caractérisé en ce que le défibrage et le décrochage des contaminants autres que l'encre a lieu à froid ou à température ambiante.

3. Procédé selon la revendication 1 caractérisé en ce que l'énergie spécifique appliquée à la suspension fibreuse pendant le défibrage a) est inférieure à 50 KW. H/tonne pendant environ 20 minutes.

4. Procédé selon la revendication 1 caractérisé en ce que les traitements de ramollissement, de décrochage et de dispersion de l'encre c) et d) ont lieu à une pression supérieure à la pression atmosphérique.

5. Procédé selon la revendication 1 caractérisé en ce que la durée totale des traitements c) et d) est comprise entre 2 et 10 minutes, de préférence entre 3 et 5 minutes.

6. Procédé selon la revendication 1 caractérisé en ce que l'énergie spécifique totale appliquée lors des traitements de ramollissement, décrochage et dispersion c) et d) est comprise entre 50 et 100 KWH/tonne, de préférence 80KWH/tonne.

7. Procédé selon la revendication 1 caractérisé en ce que les traitements de ramollissement, décrochage et dispersion c) et d) ont lieu dans un seul et unique appareil, comme par exemple un triturateur ou désintégrateur.

8. Procédé selon la revendication 1 caractérisé en ce que les traitements de ramollissement, décrochage et dispersion c) et d) ont lieu dans deux appareils distincts, comme par exemple un tube de chauffage suivi d'un disperseur.

9. Procédé selon la revendication 1 caractérisé en ce que l'élimination des particules d'encre de la masse fibreuse a lieu au moyen d'un lavage, d'une flottation, ou de toute combinaison de ces deux procédés.

10. Procédé selon la revendication 1 caractérisé en ce que l'alcalinité de la suspension fibreuse est réalisée par addition de l'un quelconque ou d'un mélange des produits chimiques suivants : hydroxyde de sodium, hydroxyde de calcium, hydroxyde de magnesium, carbonate de sodium, phosphate de sodium, tripolyphosphate de sodium, pyrophosphate de sodium, silicate de sodium.

11. Procédé selon la revendication 1 caractérisé en ce que l'on introduit un agent oxydant lors des traitements de ramollissement et dispersion à hautes concentration et température c) et d).

12. Procédé selon les revendications 1 et 11, caractérisé en ce que l'on procède à un blanchiment de la masse fibreuse simultanément aux traitements de ramollissement et décrochage c) et d).

13. Procédé selon la revendication 1 caractérisé en

DECLARATION

I, John R. Graham, declare that I reside at 434 Liberty Boulevard, Lake of the Woods, Locust Grove, Virginia 22508;

That I am fluent in both English and French;

That I have been actively engaged in the study and translation of the French language for approximately twenty years;

That I am employed as a translator by the United States Patent and Trademark Office in Washington, D.C.;

That I have prepared a translation of Claim 1 of a certified copy of European Patent Application No. 0,092,124, "Procédé de production de pâtes à papier partant d'un mélange de vieux papiers imprimés non sélectionnés" ["Method of Producing Paper Pulp from a Mixture of Unselected Printed Waste Paper"]; said translation thereof being attached hereto and made a part of this declaration;

That to the best of my knowledge and belief, the attached translation is accurate and fairly reflects the contents and meaning of the foreign language document.

I declare, under penalty of perjury under the laws of the United States of America, that the foregoing is true and correct.

Executed, on May 9, 1997.

John R. Graham

John R. Graham

Subscribed and sworn to me in my presence this 9th day of May, 1997, a Notary Public in and for the Commonwealth of Virginia

Arlington, VA

Notarized Version is My Commission as Virginia Notary Public Seal
My Commission Expires March 31, 2000
DANITA L. BRAHAM

SA 000050

[Translation of Claim 1 of European Patent Application No. 0,092,124]

Filing Date:	April 9, 1983
Priority:	Italy, Patent No. 6,751,482, April 19, 1982
Publication Date:	October 26, 1983 (Bulletin 83/43)
Applicant:	Jean Marie Clement
Inventor:	Jean Marie Clement
Agent:	Franco Buzzi et al, c/o Jacobacci-Casetta & Perani S.p.A. Via Alfieri, 17 I-10121 Torino ITALY
French Title:	Procédé de production de pâtes à papier partant d'un mélange de vieux papiers imprimés non sélectionnés"
English Title:	METHOD OF PRODUCING PAPER PULP FROM A MIXTURE OF UNSELECTED PRINTED WASTE PAPER

CLAIMS

1. Method of treating printed and contaminated waste paper with a view to recycling it for the manufacture of paper or paperboard, characterized in that the raw material undergoes the following treatments:

a) defibering in an aqueous medium, preferably at a neutral or slightly alkaline pH, under cold conditions or at ambient temperature, by applying a low specific energy so as to produce a pumpable fibrous suspension in which the non-ink contaminants have been removed but not dispersed into the fibrous mass;

b) elimination of the non-ink contaminants from the fibrous mass by mechanical means alone, excluding any type of flotation or solvent extraction or any other chemical process, using conventional vortex or screen cleaners, and without any subsequent application of vigorous agitation;

c) softening of the printing ink vehicles and weakening of their bonds to the surface of the fibers by subjecting the pulp, at a consistency of greater than 15%, to the simultaneous effects of (A) high temperature - between 85 and 130°C - , (B) strong shearing forces and (C) at least one chemical deinking agent, all of which is carried out under a high degree of alkalinity;

d) removal of the ink particles from the surface of the fibers and a fine, stable dispersion of said particles into the fibrous mass as a result of the simultaneous effects of (A) high temperature - between 85 and 130°C - (B) very strong shearing forces and (C) at least one chemical dispersing agent, all of which is carried out under a high degree of alkalinity;

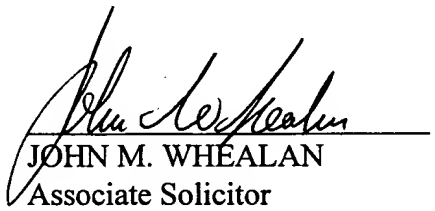
e) elimination of the ink particles thereby removed and dispersed, by the most appropriate means known and according to the degree of brightness required by the final use of the pulp.

Translation
U.S. Patent and Trademark Office
May 9, 1997
J. R. Graham

CERTIFICATE OF SERVICE

I hereby certify that on May 13, 1997, I caused two copies of the foregoing BRIEF AND SUPPLEMENTAL APPENDIX FOR APPELLEE COMMISSIONER OF PATENTS AND TRADEMARKS to be transmitted via FEDERAL EXPRESS addressed as follows:

Lawrence M. Green
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210



JOHN M. WHEALAN
Associate Solicitor

P.O. Box 15667
Arlington, Virginia 22215
703-305-9035